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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,266	10/16/2003	Dwip N. Banerjee	AUS920030732US1	9995
43307	7590	06/27/2007	EXAMINER	
IBM CORP (AP) C/O AMY PATTILLO P. O. BOX 161327 AUSTIN, TX 78716			NAUROT TON, JOAN	
			ART UNIT	PAPER NUMBER
			2154	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/687,266	Applicant(s) BANERJEE ET AL.	
	Examiner Joan B. Naurot Ton	Art Unit 2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/16/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 15- 21 are rejected because the claimed invention is directed to non-statutory subject matter. In this case, the recording means is being defined as transmission media, which can include signals that pass through the air which is in a non statutory category. Paragraph 0025, line 12.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 8, 15, 2, 9, 16, 4, 11, 18, 5, 12, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over McPherson (US patent 6944167) in view of Alkhatib et al, hereinafter referred to as Alkhatib (US publication 2004/0044778 A1)

Regarding claims 1, 8, and 15:

McPherson discloses a client system communicatively connected to a public network (Column 4, lines 40-41 discloses "a request from a host external to the private network (i.e. located in the public network)"; a NAT device accessible to said public

network and accessible to at least one NAT data processing system located in a NAT enabled network behind said NAT device (abstract, lines 3-8 disclose a network address translator being queried from an external client for an address of another host behind a NAT device), method, system, recording medium, and product with means (Column 3, lines 15-21), for accessing a data processing system behind a network address translation (NAT) enabled network, comprising: querying, from a client system located outside a NAT enabled network ("request generated external to the private network" abstract, lines 3-4), a NAT device for an address of a NAT data processing system located behind said NAT enabled network (Figure 2C 282 shows a request query to a network address translator for an address of a computer behind NAT); automatically routing said query through said NAT device to a DNS server, wherein said DNS server returns an address for said NAT data processing system for said NAT device (Figure 2C shows the Network Address Translator replying to a DNS server, and the DNS server returns an address to the "requesting host" Column 2, line 31); and sending packets, from said client system to said NAT data processing system at said address, such that said NAT data processing system behind said NAT enabled network is directly accessed by said client system from outside said NAT enabled network. ("The requesting host can then use this returned public network address for communicating with the private network host." Abstract, lines 11-12.) McPherson discloses all the limitations as disclosed above except for sending with source routing.

Alkhatib teaches source routing (paragraph 0150 line 12) through a NAT device. (paragraph 0150 lines 24-25 discloses "data can flow between hosts A and C...through NAT....").

The general concept of providing source routing through a NAT device is well known in the art as illustrated by Alkhatib who discloses source routing through a NAT device in an accessing method, system, and product with means.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify McPherson to include the use of source routing through NAT in his advantageous method as taught by Alkhatib in order to forward "the communication to the entity inside the private" network as stated by Alkhatib in his abstract, last two lines.

Regarding claims 2, 9, and 16:

McPherson discloses the method, system, and product with means for accessing a data processing system behind a NAT enabled network, wherein said querying a NAT device for an addresses of a NAT data processing system further comprises: receiving a user request to establish a connection with a particular domain name, wherein said domain name identifies said NAT data processing system ("receiving the domain name service query from a requesting host for the public address of the private network host." Column 3, lines 24-25, and "a requesting host desiring access to a host within a private network" Column 2, lines 31-31 which implicitly disclose the establishment of the connection) and sending a DNS query of said domain name to said NAT device ("The domain name server queries a network address translator of the private network" abstract, lines 7-8).

Regarding claims 4, 11, and 18:

McPherson discloses the method, system, and product with means for accessing a data processing system behind a NAT enabled network wherein automatically routing said query through said NAT device to a DNS server, further comprises: automatically routing said query through said NAT device for handling DNS queries. (Figure 1 shows how the public host external to the NAT device must go through the NAT router to get to the DNS). McPherson discloses all the limitations as disclosed above except for using a pre-selected NAT port.

Alkhatib uses a pre-selected NAT port. (Paragraph 0050 last two lines, and line 5, next page same paragraph, discloses that a look up table containing the NAT port number is used for connections.)

The general concept of using a preselected port number of a NAT device is well known in the art as illustrated by Alkhatib who discloses the preselected port number of a NAT device in an accessing method, system, and product with means.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify McPherson to include the use of a preselected port number in his advantageous method as taught by Alkhatib in order to forward "the communication to the entity inside the private" network as stated by Alkhatib in his abstract, last two lines.

Regarding claims 5, 12, and 19:

McPherson discloses the method, system, and product with means for accessing a data processing system behind a NAT enabled network wherein automatically routing said query through said NAT device to a DNS server, further comprises: automatically

routing said query to said DNS server that stores at least one private address for at least one private system located behind said NAT enabled network and for said NAT device. (Claim 7 first paragraph discloses a DNS server with a private address field for the private network host. Claim 7 second paragraph discloses that the NAT device also has a private address field.) McPherson discloses all the limitations as disclosed above except for source routing.

Alkhatib teaches source routing (paragraph 0150 line 12) through a NAT device. (paragraph 0150 lines 24-25 discloses "data can flow between hosts A and C...through NAT....").

The general concept of providing source routing through a NAT device is well known in the art as illustrated by Alkhatib who discloses source routing through a NAT device in an accessing method, system, and product with means.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify McPherson to include the use of source routing through NAT in his advantageous method as taught by Alkhatib in order to forward "the communication to the entity inside the private" network as stated by Alkhatib in his abstract, last two lines.

5. Claims 3, 10, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over McPherson and Alkhatib, as applied to claims 1,8 and 15, and further in view of Dalgic et al, hereinafter referred to as Dalgic (US patent 6925076) and the Unix manual pages (<http://web.archive.org/web/20020102131755/http://www.scit.wlv.ac.uk/cgi-bin/mansec?4+resolv.conf>)

Regarding claims 3, 10, and 17:

McPherson discloses the method, system, and product with means for accessing a data processing system behind a NAT enabled network, wherein said querying a NAT device for an addresses of a NAT data processing system further comprises: sending, from said client system, a DNS query for a domain name of said NAT data processing system to a first address (McPherson discloses that a DNS query is sent to request an address of a NAT data processing system, as well as the DNS being configured for providing for address fields Claim 1, lines 55-65, and in addition figure 1 discloses an address for the domain name server network interface) and, sending, from said client system, said DNS query to a second address (Claim 1, lines 7 discloses that the request for an address is sent to a Network address translator, and Figure 1 shows a different or second address for the network address translator than that of the DNS, wherein said second address is a location for said NAT device (Figure 1 discloses the NAT router with an address). McPherson discloses all the limitations as disclosed above except for responding to receiving a fail signal, and accessing a resolv.conf file.

Dalgic teaches receiving a fail signal and responding to the fail signal.

("Further, in some embodiments, a secondary gate controller can send a message to the edge router indicating the failure of the gate controller. The edge router can update the call state information after receiving the message..." Column 2, lines 51-53)

The general concept of responding to a fail signal is well known in the art as illustrated by Dalgic who discloses a fail signal in an H.323 system which does network address translation. It would have been obvious for one of ordinary skill in the art at the time of the invention to modify McPherson of his NAT system, method, and medium in

as taught by Dalgic in order for the edge router to "support a standard network address translation (NAT) protocol" as stated by Dalgic in Column 2, last two lines.

The Unix Manual pages teaches accessing a resolv.conf file. (According to the man page for the resolv.conf file, "The resolver routines provide access to the Internet Domain Name System. The resolver configuration file contains information that is read by the resolver routines the first time a process calls them." First two paragraphs of the description of resolv.conf in man page.)

The general concept of accessing a resolv.conf file is well known in the art as illustrated by the Unix manual page which discloses reading from a resolv.conf file in a routine that helps resolve domain names. It would have been obvious for one of ordinary skill in the art at the time of the invention to modify McPherson of his address translation method, system, medium, and product with means in his advantageous method as taught by the Unix manual page in order to "provide access to the Internet Domain Name system and provide various resolver information" as stated by the Unix manual page in the description section of the resolv.conf page, first page, first two paragraphs.

6. Claims 6, 13, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over McPherson (US patent 6944167) in view of Alkhatib et al, hereinafter referred to as Alkhatib (US publication 2004/0044778 A1) as applied to claims 1, 8, and 15, and further in view of Dalgic.

Regarding claims 6, 13, and 20:

McPherson discloses the method, system, and product with means for accessing a data processing system behind a NAT enabled network further comprising: returning, from said DNS server, a plurality of addresses (Since a "set of public addresses is shared, with a public network address being dynamically allocated to a private network host" abstract, lines 12-15, a plurality of addresses is disclosed) of a plurality of parallel data processing systems to said NAT data processing system located behind said NAT enabled network (the figure in the abstract shows two such data processing systems 197 and 198 behind a NAT network); and send packets to said NAT data processing system, sending packets to a first data processing system from among said plurality of parallel data processing systems at one of said plurality of addresses with source routing through said NAT device ("The requesting host can then use this returned public network address for communicating with the private network host." abstract, lines 11-12, and the figure in the abstract shows two private network hosts with two different addresses—a plurality of addresses.)

McPherson discloses all the limitations as disclosed above except for responding to reception of a fail signal and source routing through a NAT device.

Alkhatib teaches source routing (paragraph 0150 line 12) through a NAT device. (paragraph 0150 lines 24-25 discloses "data can flow between hosts A and C...through NAT....").

The general concept of providing source routing through a NAT device is well known in the art as illustrated by Alkhatib who discloses source routing through a NAT device in an accessing method, system, and product with means.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify McPherson to include the use of source routing through NAT in his advantageous method as taught by Alkhatib in order to forward "the communication to the entity inside the private" network as stated by Alkhatib in his abstract, last two lines.

Dalgic teaches receiving a fail signal and responding to the fail signal.

("Further, in some embodiments, a secondary gate controller can send a message to the edge router indicating the failure of the gate controller. The edge router can update the call state information after receiving the message..." Column 2, lines 51-53)

The general concept of responding to a fail signal is well known in the art as illustrated by Dalgic who discloses a fail signal in an H.323 system which does network address translation. It would have been obvious for one of ordinary skill in the art at the time of the invention to modify McPherson of his NAT system, method, and medium in as taught by Dalgic in order for the edge router to "support a standard network address translation (NAT) protocol" as stated by Dalgic in Column 2, last two lines.

7. Claims 7, 14, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over McPherson in view of Alkhatib et al, hereinafter referred to as Alkhatib (US pub 2004/0249974 A1)

Regarding claims 7, 14, and 21:

McPherson discloses all the limitations of the method, system, and product with means for accessing a data processing system behind a NAT enabled network except for: authenticating an identity of a user at said client system; only allowing access to said NAT data processing system if said authenticated identity of said user matches one

of a plurality of authenticated users enabled to access systems behind said NAT enabled network.

Alkhatib teaches a user authentication with a NAT enabled network. (Paragraph 0108 line 5, discloses that the members are behind a NAT device and paragraph 0131 discloses a user authenticator. Paragraph 1008 discloses that "Policies are used to allow or deny access to individual machines, services, or other users." last sentence)

The general concept of providing a user authenticator for entities to access systems behind a NAT device is well known in the art as illustrated by Alkhatib who discloses a user authentication in a NAT system.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify McPherson to include the use of a user authenticator in his advantageous method as taught by Alkhatib in order to "enable the rapid creation of a secure means that allows local and remote specified entities to communicate..." as stated by Alkhatib in paragraph 0005, lines 8-10.)

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joan B. Naurot Ton whose telephone number is 571-270-1595. The examiner can normally be reached on M-Th 9 to 6:30 (flex sched) and alt Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2154

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JBNT
06/25/2007



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